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Building Customer Loyality for Marning Corn in Bulukumba: The Impact of Brand Image, Service Quality, and Product Quality on Purchase Decisions and Customer Satisfaction

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Marning corn products, typical food, and souvenirs from the Bulukumba district are packaged simply without complete product information. Yet by integrating well-designed packaging with clear and relevant product information that can improve product quality, brands can improve the overall consumer experience, build trust, and foster long-term loyalty. This research aims to analyze the direct and indirect influence of brand image, service quality, and product quality on purchasing decisions and consumer satisfaction on consumer loyalty to making corn. The research method used quantitative analysis with structured interview techniques using a sample of corn buyers in Bulukumba Regency. The data analysis used is structural equation modeling (SEM) analysis using the AMOS application. The research results show that consumer satisfaction and brand image have a significant direct influence on loyalty. Brand image and service quality have an impact on purchasing decisions. Product quality, service quality, and brand image influence consumer satisfaction. Meanwhile, the variables of service quality and production quality do not have a significant effect on consumer loyalty through purchasing decisions and consumer satisfaction as intervening variables of brand image, service quality, and production quality. Increasing income in the Morning Corn business can be achieved by prioritizing brand image, service quality, and product quality so that later it can increase the number of buyers and increase consumer loyalty.

Keywords: Customer loyalty, buying decision, customer satisfaction, brand image, service quality, product quality and marning corn.

INTRODUCTION

Agro-industrial development is an advance stage of agricultural development. It has been demonstrated that the agro-industry may boost agribusiness players' incomes, absorb labor, generate foreign exchange profits, and promote the growth of other industries. Abundant agricultural products in rural areas are often a problem for farmers in this condition, efforts are made to optimize agricultural products, namely by making breakthroughs so that the products produced have added value and higher selling value, with the products produced can improve the economy and at the same time add new jobs for the community (Azizu et al., 2023). Corn crops are one type of agricultural commodity, but their usage has not been fully realized; currently, over 55% of the corn needed for domestic is used as feed, 30% is consumed as food, and the remaining portion is utilized for industrial purposes and seeds (Fitria 2018). One of the agricultural products of corn crops, namely Marning corn as one of the snacks is quite popular, especially in Bulukumba Regency, Marning corn is in great demand by customers because it tastes savoury and also delicious so that nowadays Marning corn is starting to be created by snack business actors in various flavours, such as original marning corn, spicy Marning corn, sweet taste, and

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spicy sweet taste. However, there are still many problems with Marning corn products, one of which does not have an expiration date and is simple in packaging. The problem of Marning corn products produced has a short shelf life due to manual packaging using plastic glued using incandescent lamps so that the adhesion is not too strong, this makes the product soften quickly and is no longer crispy during storage for several months. In addition, the label used is still in the form of paper which is in direct contact with the Marning corn product (Mustafa & Sapsal, 2018). So that Marning Corn products cannot compete optimally with snacks circulating in modern markets, therefore it can affect consumer loyalty. Building consumer loyalty is influenced by several factors that arise due to satisfaction with a particular brand by meeting the desired criteria and making purchases continuously. Consumer satisfaction and consumer purchasing decisions are influenced by several factors, namely brand image, product quality, and service quality. Brand image is obtained from the overall consumer perception of the brand and is formed through information and past experiences with the brand (Amilia, 2017). Product quality has product characteristics that depend on its ability to satisfy stated or implied customer needs (Maramis et al., 2018). Service quality is a series of special forms of a production or service that can provide the ability to satisfy the needs and desires of the community (Ibrahim & Thawil 2019). Numerous studies have identified variables that affect customer loyalty, customer satisfaction, and buying decisions. Imtiyaz et al. (2022) found that there is a strong and positive correlation between customer desire to purchase and consume delectable food and factors such as marketing, nation of origin/production, processing technology, packaging, country of brand, and store (Imtiyaz et al., 2022). Then, according to Fifin Anggraini, her research indicates that customer satisfaction is significantly and favorably impacted by price, marketing, and service quality. For Marning corn, customer loyalty is significantly and favorably impacted by customer satisfaction (Anggraini and Budiarti, 2020). Similar to this, trust has an impact on customer satisfaction, according to studies by Tirtayasa et al. (2021) on product quality. Trust and the quality of the goods have a favorable and significant influence on buying decisions. The buying decision has a positive and significant impact on customer satisfaction. The buying choice plays a role in influencing customer happiness and product quality (Tirtayasa et al., 2021). Based on the descriptions and problems and previous research that have been described, the researchers developed loyalty research which is usually only seen from several aspects, so the researchers combined several important aspects that affect loyalty, namely customer satisfaction and purchasing decisions and commodities taken in terms of agricultural products with the aim of analyzing the direct and indirect effects of brand image, service quality, product quality on consumer loyalty of Marning Corn in Bulukumba Regency through purchasing decisions and satisfaction.

Theoretical framework

***Brand Image*:** Brand image refers to the consumer's view of a brand (Malarvizhi et al., 2022). According to Lamb (2004) and Pradana and Hudayah (2017) brand image indicators are as follows:

1. The brand is known by the wider community.
2. The brand adds to the self-image of its users.
3. The brand has characteristics that are different from other brands.

***Service Quality*:** Service quality is all formulated from the customer's perspective, that is, what the customer perceives is an important dimension of quality. The customer's perception of quality is the expectation of his level of satisfaction with the service (Falk et al., 2010); (Bezerra & Gomes, 2015); (Lin et al., 2020). Service quality uses 5 indicators from (Kotler & Keller, 2016); (Paryanti & Budi, 2022) which include:

1. Tangible / physical evidence is the ability of a company to show its existence to external parties.
2. Reliability is the company's ability to provide services as promised accurately and reliably.
4. Responsiveness / responsiveness is a willingness to help and provide fast and precise service to customers through the delivery of clear information and supported by the desire of staff to help customers.
5. Assurance / guarantee is the knowledge, courtesy and ability of company employees to foster customer trust in the company which includes knowledge, courtesy, and trustworthiness of staff, free from danger, risk and doubt.
6. Empathy is the ability of the company or company staff to provide sincere personal attention to customers by trying to understand customer desires, which include ease of contact, good communication and understanding consumer needs.

***Product Quality*:** Product quality is the product's ability to carry out its functions, that ability includes durability, reliability, other valuable tribute funds on the product as a whole (Amilia, 2017). According to Kotler and Keller (Cahyani & Sitohang, 2016; Cesariana et al., 2022), there are nine indicators of product quality, namely:

1. Shape, including the size, shape, or physical structure of the product.
2. Features, product characteristics that complement the basic functions of the product.
3. Performance, the degree to which the product's main characteristics work well.
4. Impression of quality, which is the result derived from the assessment of use that is unconsciously carried out at the time of use, because there is a possibility that consumers do not understand the product concerned or lack of information about the product used.

5. Durability, a measure of the durability of a product which is important for certain products.
6. Reliability is that a product has the ability in the form of product resistance not to fail or damage within a certain period of time.
7. Ease of repair is a dimension of the ease of repairing a product when it fails or cannot be used again.
8. Style, realizing the form of product appearance and product variations to consumers.
9. Design is the overall feature that includes the look, feel, and usability of the product based on customer expectations and needs.

***Consumer Satisfaction*:** Consumer satisfaction (Kotler & Keller, 2012; Tirtayasa et al., 2021) is a person's feeling of pleasure or vice versa due to comparing the product performance (or results) obtained with expectations. According to Zeithaml, Parasuraman and Berry (Ruslim & Rahardjo, 2016), the dimensions of customer satisfaction can be divided into several types, namely:

1. Expectations. The company's ability to provide customization to consumers for a product or service that consumers want.
2. Perceived delivery product or service. The ability to serve consumers at the time of selling products or services.
3. Confirmation or disconfirmation. The company's ability to meet consumer needs with the aim that consumers are not disappointed and feel satisfied with the product or service that matches the company's promise or vice versa.
4. Complaining behavior. The company's capacity to explain negative consumer feedback into positive ones.

***Buying Decision*:** The buying decision is a problem-solving approach to human activities to buy a good or service in fulfilling their wants and needs which consists of recognizing needs and wants, searching for information, evaluating purchasing alternatives, purchasing decisions and behavior after purchase (Nasution et al., 2019). According to Kotler et al. (2009), and Pradana and Hudayah (2017), purchasing decisions are consumer decisions regarding preferences for brands in the selection pool. The indicators of purchasing decisions are as follows:

1. Steadiness to buy after knowing product information.
2. Decided to buy because of the most preferred brand.
3. Buying because it suits your wants and needs.
4. Buying because they get recommendations from other people.

***Loyalty*:** Loyalty is literally defined as loyalty, namely a person's loyalty to an object. Loyalty as a condition where customers have a positive attitude towards a brand, have a commitment to that brand, and intend to continue their purchases in the future. This means that loyalty is always related to customer preferences and actual purchases (Lupipyoadi, 2009; Rofiah & Wahyuni, 2017). Attitudinal loyalty can be reflected in consumers' intention to recommend products, brands or services to others (Lee & Wong, 2021). According to Tjiptono (2002), and Rofiah and Wahyuni (2017), six indicators that can be used to measure consumer loyalty, namely:

1. Repurchase,
2. The habit of consuming the brand,
3. Always like the brand,
4. Keep choosing the brand,
5. Believe that the brand is the best,
6. Recommend the brand to others.

***H1: Brand image has a significant effect on purchasing decisions*:** Attitudes toward a brand, such as preferences and beliefs, are associated with its brand image. It is more probable that consumers who have a favorable perception of a brand will repeatedly purchase (Amilia, 2017). Buyer decisions are frequently influenced by the company's image, which encompasses its reputation, expertise, or good name. Brand image has a significant and positive impact on purchasing decisions, resulting in a higher likelihood of purchase for consumers who have a favorable brand image (Rachmawati & Andjarwati, 2020).

***H2: Service quality has a significant effect on buying decisions*:** Buying decisions are influenced by service quality because the level of service quality that is carried out has a significant role in fostering consumer buying decisions (Djafar et al., 2023). Service quality is significant to buying decisions (Boediono et al., 2018). Also suggests that service quality is closely related to buying decisions.

***H3: Product quality has a significant effect on customer satisfaction*:** According to Wijaya (2011) and Maramis et al., (2018), product quality is the complete set of product attributes that are the production engineering, result of marketing, and maintenance, and that enable the product to satisfy the expectations of the consumer or customer. A product or service's quality is contingent upon its capacity to meet the stated or implied requirements of its customers (Kotler et al., 2008). It is suggested by Ibrahim and Thawil (2019) that customer satisfaction can be directly correlated with product quality variables.

***H4: Service quality has a significant effect on customer satisfaction*:** Measurement of service quality refers to the extent to which the level of service provided meets the expectations of the consumer (Cesariana et al., 2022). Hermawan (2018), and Ibrahim and Thawil (2019) suggested that service quality is a collection of unique production or service forms that have the capacity to meet societal requirements and desires. Mahira et al. (2021) suggested that customer satisfaction is significantly influenced by the quality of service, which in turn increases customer satisfaction. Rosa's research (Lesmana & Ratnasari, 2019; Nanincova, 2019; Ichsan & Karim, 2021) announced that customer satisfaction significantly affected service quality.

***H5: Product quality has a significant effect on Buying decisions*:** Consumers are inclined to purchase products that are of high quality, as they are eager to do so (Amilia, 2017). Positive consumer perceptions of food product quality will have an impact on consumer choices in deciding to buy. Product quality is significant to buying decisions. As the impact of product quality increases, so does the purchasing decision (Fatlahah, 2015). Product quality that can attract consumers to make purchases is having product advantages that are not owned by competitors.

***H6: Brand image has a significant effect on customer satisfaction*:** Higher brand loyalty is the consequence of a robust brand image's impact on consumer perceptions. In addition to serving as a consumer memory of a brand, a favorable brand image must be readily embraced by consumers, thereby enhancing brand loyalty and customer satisfaction (Jasin, 2022). Brand image affects consumer/customer satisfaction (Rivai et al., 2019; Sapitri et al., 2020; Putra, 2021; Andrian & Fadillah, 2021).

***H7: Customer satisfaction has a significant effect on loyalty*:** Every organization aspires to fulfill consumer requirements. The company's competitive advantage can be enhanced by satisfying consumer requirements, in addition to being a critical factor in its survival (Meithiana, 2019; Rohman & Suji'ah, 2021). Consumers who are content with their purchases and services are inclined to utilize them again when their requirements recur in the future. As a result, the company's sales volume is primarily comprised of repeat purchases, which are contingent upon consumer satisfaction.

***H8: Buying decisions have a significant effect on loyalty*:** Purchases will continue to bear fruit if what is obtained is in accordance with expectations and desires, this can be said that customer loyalty has arisen. Buying decision variables has a significant effect on loyalty variables (Sulistiani, 2016). If consumers get goods that match their desires and feel satisfied buying (Pertiwi et al., 2022).

***H9: Brand image has a significant effect on loyalty*:** A good brand image means that customers will be loyal and make continuous purchases, so that the brand image (Sapitri et al., 2020). Consumer loyalty is significantly influenced by brand image as well (Yunaida, 2017)

***H10: Product quality has an effect on loyalty*:** Customer loyalty is significantly influenced by product quality (Minar & Safitri, 2017; Djumarno et al., 2017; Khoironi et al., 2018). This implies that customers will be more loyal to the product as the quality of the product improves (Cardia et al., 2019). Despite the advantages offered by competitors, consumers' devotion to the product renders them incapable of altering their appraisal of it.

***H11: Service quality has an effect on loyalty*:** The relationship between service quality and customer loyalty is very related, as in research (Thung, 2019) and (Septiana et al., 2021) the most dominant variable is service quality which has a positive effect on customer loyalty. With good service, it will also make consumers repeat purchases to the seller, so that customer loyalty will arise to the quality of service provided (Pertiwi et al., 2022).

***H12: Brand image through buying decisions has a significant influence on loyalty*:** The purchasing decisions of consumers are significantly influenced by the image of the company. How the public perceives the company's image is contingent upon its popularity and its capacity to satisfy consumer demands.

***H13: Service quality through buying decisions has a significant effect on loyalty*:** The service quality is considered poor if the service obtained is lower than the customer expected, and it will be called the ideal if the customer receives a service quality that exceeds her or his expectations (Fauzi & Mandala, 2019). Consumer satisfaction becomes higher is determined by the quality of service provided and experienced, which in turn leads to consumer loyalty (Setyowati & Wiyadi, 2016).

***H14: Product quality through buying decisions has a significant effect on loyalty*:** The indirect impact of product quality on customer loyalty is apparent in the purchasing decisions of customers, indicating a significant relationship between the two. Therefore, it is possible to infer that the relationship between product quality and customer loyalty is partially mediated by purchasing decisions (Ratnasih & Nurjanah., 2019).

***H15: Brand image through customer satisfaction has a significant influence on loyalty*:** A positive attitude toward a product or brand is indicative of "loyalty", which is a state in which consumers are committed to the brand and plan to always repurchase it in the future. Research (Pramudyo, 2012) suggests that it has an intervening influence on brand image and loyalty variables by comparing the magnitude of direct and indirect effects.

***H16: Service quality through customer satisfaction has a significant effect on loyalty*:** The degree of customer satisfaction serves as an intervening variable in the relationship between service quality and customer loyalty through Always using company services, resistance to competitor persuasion, and recommendations to others (word of mouth). These results support research conducted (Endarwita, 2013), which states that between consumer loyalty and service quality, customer satisfaction functions as an intervening variable. In an indirect manner, customer satisfaction impacts the relationship between service quality and consumer loyalty (Familiar & Maftukhah, 2015).

***H17: Product quality through customer satisfaction has a significant effect on loyalty*:** According to research (Familiar & Maftukhah, 2015) which shows that the customer satisfaction variable acts as an intervening variable in the effect of product quality on customer loyalty, always using the company's services, resistance to competitor persuasion and recommendations to others.

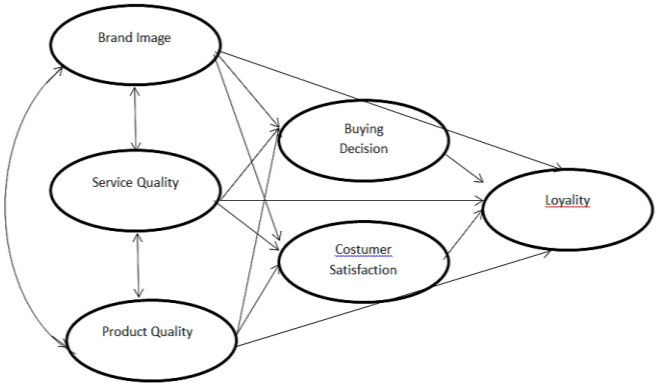

Figure 1. Conceptual Model

MATERIALS AND METHODS

***Location and Time of Research*:** Bulukumba Regency is the selected location to conduct the study. The determination of this location was determined deliberately with the consideration that marning corn is one of the specialty foods of Bulukumba Regency, South Sulawesi. The investigation was conducted over the course of three months, specifically from March to June 2023.

***Data Collection Sources and Techniques*:** The primary data is the source data for this research which are obtained from individuals who provided information related to the research. Data collection was through structured interview techniques with research instruments in this case was a questionnaire to respondents who have bought or end customers of Marning corn in Bulukumba Regency, South Sulawesi. The questionnaire in this study used a Likert scale of 1-5 to determine or measure the perception of a respondent which comes out as opinion or attitude (Kaltsum & Dewi, 2022).

***Population and Sample*:** The population in question is all customers who have bought or end customers of Marning corn products in Bulukumba Regency, South Sulawesi. Simple Random Sampling was selected to be used for this study. The population size was unknown with certainty, so the sample in this study used the Cochran formula (Sugiyono, 2019) with a critical value of 5%, then, 138 respondents are selected as the sample in this study. Researchers took respondents who were final customers who had bought at souvenir stores around Melati street, Bulukumba Regency.

***Data Analysis*:** Data analysis used quantitative analysis to answer research objectives with Structural Equation Modelling (SEM) Analysis through AMOS (Analysis of Moment Structural) software. This method allowed to analyse the direct and indirect relationships between brand image factors, service quality factors, product quality factors on purchasing decision factors and customer satisfaction factors and customer satisfaction in a complex manner. In this SEM model, 23 observed variables/indicators were measured, in addition to three exogenous and three endogenous latent variables. Path diagrams are employed to establish the connection between variables and the structural and measurement models. In SEM, the measurement model used is Confirmatory Factor Analysis (CFA) because CFA is a form of latent variable measurement model by one or more observed variables (Lubis et al., 2019). The measurement model was established with indicator or manifest variables making a connection between endogenous and exogenous latent constructs, and a structural model was developed by making a connection between both endogenous and exogenous that are part of latent constructs. In (Figure 2) it can be seen that Marning corn product brand image variable has 3 indicators, service quality has 4 indicators, product quality has 4 indicators, buying decisionhave 3 indicators, customer satisfaction has 4 indicators and loyalty has 4 indicators.

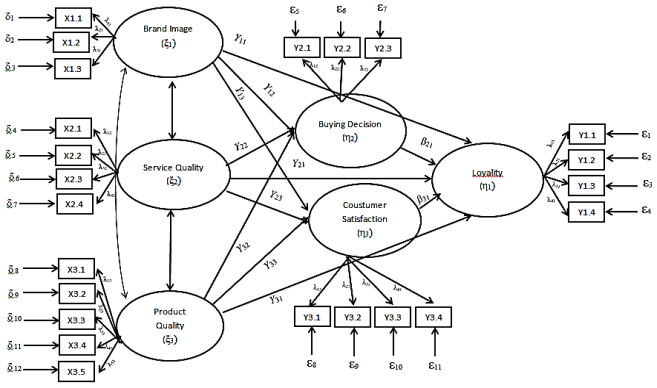

Figure 2. Structural Equation Modelling (SEM) scheme of Factors Influencing Customer Loyalty through Buying decision and Customer Satisfaction on Marning corn in Bulukumba Regency.

Table 1. Measurement Equation/Measurement Model.

Exogenous Latent Var	Endogenous Latent Var
X1.1 = λ11X1 + δ1	Y1.1 = λ11Y1 + ε1
X1.2 = λ21X1 + δ2	Y1.2 = λ21Y1 + ε2
X1.3 = λ31X1 + δ3	Y1.3 = λ31Y1 + ε3
X2.1 = λ12X2 + δ4	Y1.4 = λ41Y1 + ε4
X2.2 = λ22X2 + δ5	Y2.1 = λ12Y2 + ε5
X2.3 = λ32X2 + δ6	Y2.2 = λ22Y2 + ε6
X2.4 = λ42X2 + δ7	Y2.3 = λ32Y2 + ε7
X3.1 = λ13X3 + δ8	Y3.1 = λ13Y3 + ε11
X3.2 = λ23X3 + δ9	Y3.2 = λ23Y3 + ε12
X3.3 = λ33X3 + δ10	Y3.3 = λ33Y3 + ε13
X3.4 = λ43X3 + δ11	Y3.4 = λ43Y3 + ε14
X3.5 = λ53X3 + δ12	

The structural model equation is a model of the relationship structure that forms or explains the causality between factors.

The translation of the flowchart in Figure 2 into the structural equation is:

$Y1 = \beta 21Y2 + \beta 31Y3 + Y11\ X1 + Y21\ X2 + Y31\ X3$ (1)

$Y2 = Y12\ X1 + Y22\ X2 + Y32\ X3$ (2)

$Y3 = Y13\ X1 + Y23\ X2 + Y33\ X3$ (3)

The description of the variables of the path diagram of the effect of brand image, service quality, product quality through buying decision and customer satisfaction on customer loyalty for Marning corn in Bulukumba is presented in Table 2.

Table 2. Latent variables & measurement indicators.

Latent Variable	Indicator	Code
Brand Image (X1)	Trusted brand	X1.1
	Memorable brand	X1.2
	Easy to recognise brand	X1.3
Service Quality (X2)	Tangible / Physical Evidence	X2.1
	Reliability	X2.2
	Responsiveness	X2.3
	Empathy	X2.4
Product Quality (X3)	Shape	X3.1
	Features	X3.2
	Performance	X3.3
	Resilience	X3.4
	Design	X3.5
Loyalty (Y1)	Product quality is invariable	Y1.1
	A strong liking for the brand	Y1.2
	Saying positive things	Y1.3
	Recommending brand to others	Y1.4
Buying Decision (Y2)	Suitability of desired items	Y2.1
	New products	Y2.2
	Promotion	Y2.3
Customer Satisfaction (Y3)	Confirmation of expectations	Y3.1
	Repurchase	Y3.2
	Product price is as desired	Y3.3
	Ease of accessing products	Y3.4

RESULTS

***Characteristics of Respondent*:** Identifying the characteristics of respondents has an important role in seeing the consumer profile of Jagung Marning products in Bulukumba Regency. The specific characteristics in this study are gender, age, education level and type of work which are very important in understanding the loyalty of consumers of Marning Corn products in Bulukumba Regency.

Due to female are more frequently snacks or nibbles, Marning corn in Bulukumba Regency attracts customers based on the attributes of the responders, particularly in terms of gender dominant in female. Based on age, most who buy are aged 15-25 years, which means that Marning corn is favored by children to adults. Customers of Marning corn are preferred from those who have never attended school to those with higher education, as evidenced by the fact that more people who purchase have a high school diploma or vocational training. Due to their good taste and reasonable costs, clients who are still in school make up the majority of buyers based on occupation. Purchasing Jagung Marning products in Bulukumba Regency shows that consumers make purchases one to repeatedly. this can make consumers loyal to Marning corn products can be seen in Table 4.

Table 3. Characteristics of Respondents.

No.	Description	N	%
	Gender		
1	Male	58	42
2	Female	80	58
	Age		
1	15-25	63	46
2	26-36	27	20
3	37-47	34	25
4	48-58	13	9
5	>59	1	1
	Education Level		
1	None	3	2
2	Elementary school	42	30
3	Junior high school	16	12
4	Senior high school	49	36
6	Diploma 3	2	1
7	Bachelor's degree	26	19
	Job characteristic		
1	Armed forces	1	1
2	Nurse	1	1
3	Farmers	16	12
4	Self-employed	2	1
5	Private	25	18
6	Labour	2	1
7	Teacher	2	1
8	Student in university	15	11
9	Students	36	26
10	Housewife	14	10
11	Not Working	18	13
12	Entrepreneur	6	4

Table 4. Identity of respondents based on purchase.

No.	Purchase	Number (people)	Percentage (%)
1	1	1	1
2	2	10	7
3	>3	127	92
	Total	138	100

Table 4 demonstrates that 138 respondents, namely the dominant respondents, made purchases more than three times as many as 127 people or 92%. Consumers making repeated purchases can increase consumer loyalty to Marning Corn products. this is because Marning Corn is one of the typical Bulukumba foods which is one of the souvenirs because it has

a delicious and savory taste and can be enjoyed from various ages.

Analysis of Structural Equation Modeling (SEM)

***Convergent Validity Test*:** It is the objective of the convergent validity test to ascertain whether the indicators employed are valid in relation to the latent variable. Each indicator's validity in quantifying latent variables is denoted by the size of the loading factor or standardized weights. If the expected standardized payload estimate value is 0.50 or greater, indicators are considered valid. The output of the convergent validity test is presented in Table 5.

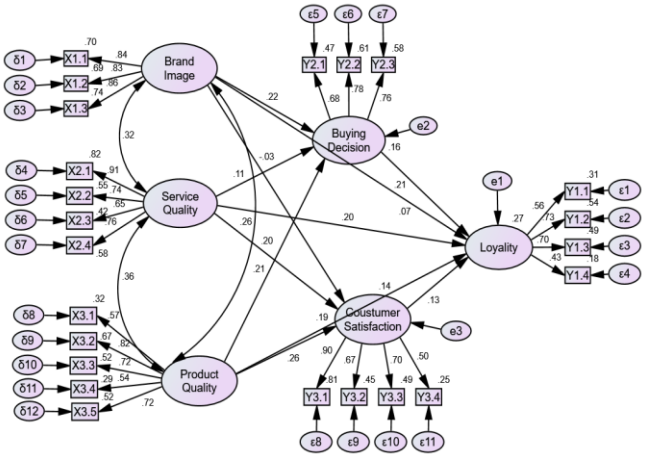

Figure 3. Path diagram.

Based on (Figure 3) the path diagram with this research model consists of 6 constructs, namely "brand image variables (X1)", "service quality (X2)", "product quality (X3)", "loyalty (Y1)", "buying decision (Y2)", and "customer satisfaction (Y3)". The construct test and validation of the model in Figure 3 can be seen in Table 5.

Table 5 shows that the indicator for question Y1.4, which measures the loyalty variable, is declared invalid because it produces a loading factor value of less than 0.50. Based on loading factor on standardized weights, the brand image variable (X1) shows the highest value in indicator X1.3 by 86%, then the service quality variable (X2) has the highest value in indicator X2.1 of 91%, then the product quality variable (X3) shows the highest in indicator X3.2 by 82%, then the loyalty variable (Y1) has the highest value in indicator Y1.2 by 73%, then the buying decision variable (Y2) results in highest value in indicator Y2.2 by 79% then and the customer satisfaction variable (Y3) is dominated by indicator Y3.1 by 90%. It is evident from Table 5 that all indicators for the variables under investigation are considered valid for measuring variables due to their AVE values exceeding 0.50. Cronbach's Alpha is employed to signify a high degree of convergence. The value of good Construct Reliability is 0.70 or more. Furthermore, the composite reliability value is employed in conjunction with Cronbach's alpha, and it is interpreted in the same manner (Figure 4).

Table 5. Construct and Validity Test.

Variables	Indicators	Loading factor	Criteria	AVE
	X1.1	0.84	0.50	
Brand Image (X1)	X1.2	0.83	0.50	0.831
	X1.3	0.86	0.50	
	X2.1	0.91	0.50	
Service Quality (X2)	X2.2	0.74	0.50	0.784
	X2.3	0.65	0.50	
	X2.4	0.76	0.50	
	X3.1	0.57	0.50	
	X3.2	0.82	0.50	
Product Quality (X3)	X3.3	0.72	0.50	0.736
	X3.4	0.55	0.50	
	X3.5	0.72	0.50	
	Y1.1	0.57	0.50	
Loyalty (Y1)	Y1.2	0.73	0.50	0.682
	Y1.3	0.70	0.50	
	Y1.4	0.43	0.50	
	Y2.1	0.68	0.50	
Buying decision (Y2)	Y2.2	0.79	0.50	0.764
	Y2.3	0.76	0.50	
	Y3.1	0.90	0.50	
Customer	Y3.2	0.67	0.50	0.736
Satisfaction (Y3)	Y3.3	0.70	0.50	
	Y3.4	0.50	0.50	

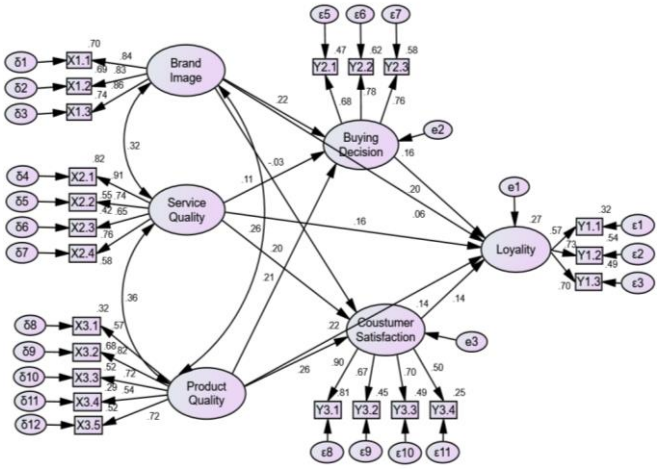

Figure 4. Path diagram after removal of invalid indicators.

The size of the loading factor (standardized weight) is indicative of the validation of each indicator that measures latent variables. The loading factor of an indicator is considered valid if it is higher than 0.50 and positive. Table 5 displays the average factor loading value obtained from the

validation test, which is known as the Average Variance Extracted (AVE).

Table 6. Indicator validation after removing invalid indicators.

Variables	Indicators	Loading Factor	Criteria	Description
Brand Image (X1)	X1.1	0.84	0.50	Valid
	X1.2	0.83	0.50	Valid
	X1.3	0.86	0.50	Valid
Service Quality (X2)	X2.1	0.91	0.50	Valid
	X2.2	0.74	0.50	Valid
	X2.3	0.65	0.50	Valid
	X2.4	0.76	0.50	Valid
Product Quality (X3)	X3.1	0.57	0.50	Valid
	X3.2	0.82	0.50	Valid
	X3.3	0.72	0.50	Valid
	X3.4	0.55	0.50	Valid
	X3.5	0.72	0.50	Valid
Loyalty (Y1)	Y1.1	0.57	0.50	Valid
	Y1.2	0.73	0.50	Valid
	Y1.3	0.70	0.50	Valid
Buying decision (Y2)	Y2.1	0.68	0.50	Valid
	Y2.2	0.79	0.50	Valid
	Y2.3	0.76	0.50	Valid
Customer Satisfaction (Y3)	Y3.1	0.90	0.50	Valid
	Y3.2	0.67	0.50	Valid
	Y3.3	0.70	0.50	Valid
	Y3.4	0.50	0.50	Valid

The loading factor that is equal to or more than 0.50 and positive, which indicates that generally the indicators are deemed legitimate based on (Table 6) which includes the variable indicators of brand image, service quality, product quality, loyalty, buying decision, and customer satisfaction.

Table 7. Variable Validation Based on AVE.

Variables	AVE	Description
Brand Image (X1)	0.831	Valid
Service Quality (X2)	0.784	Valid
Product Quality (X3)	0.735	Valid
Loyalty (Y1)	0.720	Valid
Buying decision (Y2)	0.764	Valid
Customer Satisfaction (Y3)	0.736	Valid

The data presented in Table 7 indicates that the Average Variance Extracted (AVE) method can be employed to ascertain whether the discriminant validity requirements are met for all variables. Specifically, AVE values more than 0.70 can be used to declare brand image, service quality, product quality, loyalty, buying decision, and customer satisfaction to be valid.

***Construct reliability test*:** The Cronbach's alpha 0.60 construct and the construct reliability (CR) technique are employed to conduct the construct reliability test, which means that a construct is declared reliable or its indicators are consistent in measuring the variable.

Table 8. Construct Reliability.

Variables	Construct reliability	Cronbach's Alpha	Description
Brand Image (X1)	0.915	0.821	Reliable
Service Quality (X2)	0.902	0.849	Reliable
Product Quality (X3)	0.879	0.798	Reliable
Loyalty (Y1)	0.800	0.697	Reliable
Buying decision (Y2)	0.854	0.780	Reliable
Customer Satisfaction (Y3)	0.861	0.783	Reliable

According to Table 8, all variables have reliability constructs with Cronbach's alpha values higher than 0.60. According to the reliability construct and Cronbach's alpha, these variables are therefore deemed trustworthy. As a result, the accuracy of the construct being measured can be predicted by the consistency of a measuring tool or indications of a variable that is generated.

***Model fit test*:** In an effort to ascertain whether the construct is suitable, it is intended to evaluate its feasibility. In SEM analysis, there are numerous test indices, including CMIN/DF, TLI, Probability, CFI, and RMSEA. The construct is considered appropriate if the value exceeds 0.05, according to the probability criterion. The CMIN / DF testing criterion, the construct that was constructed is acceptable (feasible) if the value is less than 2.00. According to the RMSEA criteria, the construct created is suitable if the value is not more than 0.08. If the value meets the TLI and CFI criteria and is higher than 0.90, it is deemed suitable. Thus, the model is declared suitable.

Table 9. Model Goodness of Fit.

Index	Goodness of fit	Cut off value	Description
Probability	0.000	>0.05	not fit
CMIN/DF	1.500	<2.00	good fit
RMSEA	0.060	<0.08	good fit
TLI	0.902	>0.95	not fit
CFI	0.917	>0.95	not fit

The criteria are not met by five indices, namely probability, TLI, and CFI, as evidenced by (Table 9). However, the CMIN/DF and RMSEA satisfy the criteria. The SEM model that has been developed is therefore declared unsuitable. The covariance index modification is implemented to achieve a model that is suitable, as the original model is not feasible. In essence, the Structural Equation Modeling (SEM) method in AMOS is a covariance-based SEM (CB-SEM) that

necessitates the inclusion of covariance elements. For instance, Figures 5 illustrates the path diagram that results from the modification of the covariance model index.

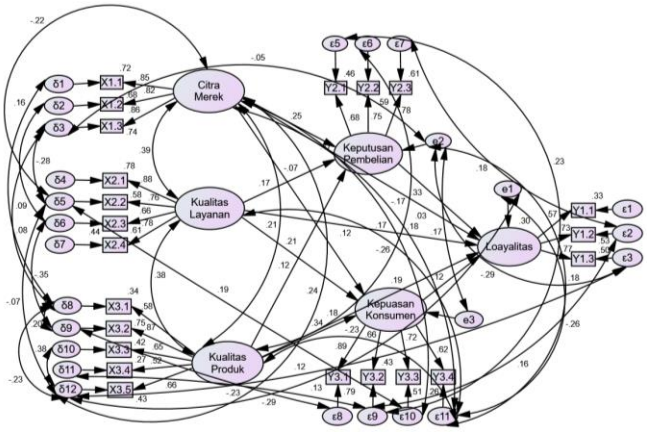

Figure 5. Path Diagram After Modification of Covariance Index (Standardized).

The findings of the path diagram, both unstandardized and standardized, are displayed in (Figure 5). The outcomes of the model's feasibility test, following the adjustment of the covariance index, have been consolidated in Table 10.

Table 10. Goodness of Fit Model After Covariance Modification.

Index	Goodness of fit	Cut off value	Description
Probability	0.617	>0.05	good fit
CMIN/DF	0.964	<2.00	good fit
RMSEA	0.000	<0.08	good fit
TLI	1.007	>0.95	good fit
CFI	1.000	>0.95	good fit

Table 10 demonstrates that the goodness of fit on the Probability index, CMIN / DF, RMSEA, TLI, and CFI all satisfy the specified criteria. Based on the findings of the index criteria, it may be inferred that the Structural Equation Analysis (SEM) path is deemed suitable for utilization.

The results of the R-Square (R2) analysis were obtained at the square multiple correlations value with the provisions of the measurement parameters in this study, namely > 0.67 (strong), > 0.33 to < 0.67 (moderate) and > 0.19 to < 0.33 (weak). The square value of multiple correlations is expressed as the R-Square (R2) value of the endogenous variables. The results of the R-Square (R2) analysis are shown in table 11.

Tabel 11. Analysis *R-Square.*

Laten variables	R-Square	Description
Loyalty (Y1)	0.684	Strong
Buying Decision (Y2)	0.851	Strong
Customer Satisfaction (Y3)	0.959	Strong

In Table 11, the R-Square value of the endogenous latent variable Y1 is 0.684, indicating that the relationship between the exogenous latent variables X1 and endogenous Y3 is a strong relationship, which means that it has an influence of 68.4% and the remaining 31.6% is influenced by other variables not included in the study. Then the R-Square value of the endogenous latent variable Y2 is 0.851, indicating that the relationship between the exogenous latent variables X1, X2 is included in the strong criteria, which means that it has an influence of 85.1% on exogenous variables while the remaining 14.9% is influenced from outside the study. Furthermore, the R-Square value of the endogenous latent variable Y3 is 0.959 which indicates that it has a relationship between the endogenous latent variables X1, X2, X3 which includes a strong influence of 95.9% while the remaining 4.1% is influenced by other variables not included in the study. As a result, it is evident that customer loyalty is significantly influenced by brand image, service quality, production quality, purchasing decisions, and customer satisfaction.

Model Hypothesis Test

***Direct Effect Test*:** Testing hypotheses is designed to evaluate exogenous variables that directly affect endogenous variables.

Table 12. Hypothesis Test of Direct Effect.

Hypothesis	Track	Standard Coefficient	S.E.	C.R.	P-Value	Description
H1	Y2<---X1	0.884	0.104	8.468	0.000	Significant
H2	Y2<---X2	0.114	0.057	2.009	0.044	Significant
H3	Y3<---X3	0.306	0.120	2.557	0.011	Significant
H4	Y3<---X2	0.237	0.090	2.617	0.009	Significant
H5	Y2<---X3	0.005	0.022	0.235	0.814	Non significant
H6	Y3<---X1	0.084	0.035	2.397	0.017	Significant
H7	Y1<---Y3	13.759	6.764	2.034	0.042	Significant
H8	Y1<---Y2	0.013	0.268	0.047	0.962	Non Significant
H9	Y1<---X1	1.243	0.604	2.058	0.040	Significant
H10	Y1<---X3	0.247	0.243	1.016	0.309	Non Significant
H11	Y1<---X2	3.156	1.678	1.881	0.060	Non Significant

The results of significant tests can be seen in p-value parameter. Endogenous variables are tested to say if the CR statistic> 1.96 or p-value <0.05, then the variables are significant. It means that the exogenous variables affect the endogenous variables. The hypothesis test results can be seen in (Table 12).

In the findings of the model hypothesis in the direct effect test, it results in different significant patterns among the analyzed variables regarding loyalty, purchasing decisions, and customer satisfaction. in particular, the variables of brand image, service quality have an effect on decisions and the variables of brand image, service quality, service quality have an effect on customer satisfaction and the variables of brand image, product quality have an effect on customer loyalty. This is indicated by a significant p-value (sig) of less than 0.05, which means that several endogenous latent variables have a direct influence on exogenous latent variables. while the product quality variable has no influence on purchasing decisions and product quality, consumer quality, purchasing decisions have no influence. this is indicated by a significant p-value of more than 0.05, which means that these variables have no direct influence. Insights from these results can be obtained a more detailed understanding of the direct influence of factors that significantly influence or do not influence loyalty, purchasing decisions and consumer satisfaction of Jagung Marning products in Bulukumba Regency which is further explained regarding these specific findings in explaining the hypothesis of direct relationships between endogenous latent variables and exogenous latents.

***Indirect Effects Test*:** Exogenous variables are tested to determine whether they have an indirect impact on endogenous variables through hypothesis testing. The results of the analysis are presented in Table 13.

Table 13. Hypothesis Test of Indirect Effect.

	Track	Statistics	P value	Description
H12	X1-Y2-Y1	0.048	0.961	Not Significant
H13	X2-Y2-Y1	0.048	0.961	Not Significant
H14	X3-Y2-Y1	0.047	0.962	Not Significant
H15	X1-Y3-Y1	1.552	0.121	Not Significant
H16	X2-Y3-Y1	1.609	0.107	Not Significant
H17	X3-Y3-Y1	1.590	0.112	Not Significant

Based on (Table 13), it is found that the effect of brand image through buying decision on customer loyalty of Marning corn, the effect of service quality through buying decision on Marning corn loyalty, the effect of product quality through buying decision on customer loyalty of Marning corn, the effect of brand image through customer satisfaction on customer loyalty of Marning corn, the effect of service quality through customer satisfaction on Marning corn loyalty, the effect of product quality through customer satisfaction on customer loyalty of Marning corn has no indirect effect.

***Convert Path Diagram to Structural Equation*:** The conversion of the path diagram into a structural equation is intended to find out how the form of influence between constructs is based on the following mathematical equation:

$$Y1 = 0.013Y2+13.759Y3+1.243X1+3.156X2+0.247X3 \quad (1)$$

$$Y2 = 0.884X1+0.114X2+0.005X3 \quad (2)$$

$$Y3 = 0.084X1+0.237X2+0.306X3 \quad (3)$$

DISCUSSION

***Brand image on buying decision*:** Brand image (X1) has a substantial impact on purchasing decisions (Y2), as evidenced by a CR statistic of 2.303 and a p-value of 0.021 which is less than 0.05. Researchers used one of the previous studies with the same topic and theory but different subjects and several flows as references. The research has the same results that A significant and positive impact of brand image on purchasing decisions is observed, as consumers who possess a favorable brand image are more inclined to make purchases (Rachmawati & Andjarwati, 2020). The better the brand image, the better someone will make a usage decision.

***Service quality on buying decision*:** The buying decisions (Y2) are significantly influenced by service quality (X2), as evidenced by a CR statistic of 2.009 and a p-value of 0.044 <0.05. the quality of service provided must be maximum because if consumers are not responded to or served quickly, consumers will move elsewhere and will give a negative impression, so that sellers must provide good service so that consumers are satisfied and believe that we can help meet their needs. At the Marning Corn shop, they served the buyers well but not optimally. Researchers used one of the previous studies with the same topic and theory but different subjects and several flows as references. The research has the same results that Service quality is significant to buying decisions (Boediono et al., 2018).

***Product quality on customer satisfaction*:** The effect of product quality (X3) on customer satisfaction (Y3) produces CR statistics of 2.557 and a p-value of 0.011 <0.05, which means that service quality has a significant effect on customer satisfaction. Researchers used one of the previous studies with the same topic and theory but different subjects and several flows as references. The research has the same results that customer satisfaction can be directly correlated with product quality. In an effort to preserve customer contentment, the organization must be capable of enhancing product quality through innovation and continuous quality control (Ibrahim & Thawil, 2019). This means that the quality of Corn Marning needs to be maintained and improved by providing the latest innovations so that consumers are increasingly satisfied.

***Service quality on customer satisfaction*:** The effect of Service quality (X2) on customer satisfaction (Y3) produces a CR statistic of 2.617 and a p-value of 0.009< 0.05, which means that service quality has a significant effect on satisfaction. In order to enhance the performance of a

company or store and to preserve the quality of its services, consumers may be encouraged to purchase specific products and services. Customer satisfaction is a critical factor in retaining customers in harmony with market demands (Ibrahim & Thawil, 2019). Researchers use one of the previous studies with the same topic and theory but different subjects and several flows as references. The research has the same results that service quality has a significant effect on customer satisfaction (Lesmana & Ratnasari, 2019), (Nanincova, 2019) and (Ichsan & Karim, 2021). Good service quality at the Jagung Marning shop can make consumers feel their own satisfaction and will make repurchases in the future.

***Product quality on buying decision*:** CR statistics of 0.235 and a p-value of 0.814> 0.05 indicate that the impact of product quality (X3) on purchasing decisions (Y2) is not statistically significant. The researcher uses one of the previous studies with the same topic and theory but different subjects and several flows as references. the research has different results where the previous study has the results that product quality is significant to buying decisions, the higher the effect of product quality, the higher the purchasing decision (Fatlahah, 2015). Purchasing decisions which means that if the quality of the product decreases, it will reduce buying decisions but does not significantly affect. Marning corn products still cannot compete with instant products in supermarkets both in terms of packaging which is still in clear plastic and also the composition of the product does not include the product expiration date so that consumers consider buying decisions on marning corn products.

***Brand image on customer satisfaction*:** This indicates that brand image has a significant impact on purchase satisfaction, as evidenced by CR statistic of 2.397 and a p-value of 0.017 <0.05. Customer satisfaction will be enhanced by emphasizing that the brand image is influenced by distinctive brand characteristics that distinguish it from others should the brand image be enhanced. The result of marketing activities aimed at brand perceptions formed and maintained by consumers in their minds. Jagung Marning products with a distinctive brand image from Bulukumba Regency have characteristics that are different from other snacks so as to maintain consumers in terms of satisfaction.

***Customer satisfaction on loyalty*:** It is evident that customer satisfaction (Y3) has a substantial impact on maring maize customer loyalty (Y1), as evidenced by a CR statistic of 2.034 and a p-value of 0.042 <0.05. Satisfaction is the sensation of delight or dissatisfaction that an individual experiences as a result of comparing the product's performance (or results) with their expectations. If the performance of a product is far from what has been expected, the customer will be dissatisfied. However, if the performance of a product is the same as what is expected, then consumers will be satisfied (Tirtayasa et al., 2021). With the feeling of satisfaction obtained, it will make consumers loyalty to the product. In Marning Corn products, consumers who feel satisfaction with the product will make repeated purchases so that consumers are loyal to Marning Corn products.

***Buying decision on loyalty*:** The CR statistic of 0.047 and a p-value of 0.962> 0.05 indicate that the effect of buying decisions (Y2) on marning maize consumer loyalty (Y1) is not statistically significant. The researcher uses one of the previous studies with the same topic and theory but different subjects and several flows as references. The research has different results where the previous study has the results that buying decision variables have a significant effect on loyalty variables (Sulistiani, 2016). This is a buying decision, namely the search for information, the recognition of needs and desires, the purchasing decision, the evaluation of purchasing alternatives, and the behavior that occurs after the purchase are the things that are involved in a problem-solving approach to human activities which is called the decision of purchasing. This approach is utilized to fulfill the wants and needs of individuals (Nasution et al., 2019). So that after going through the buying process will decide the perception of being satisfied and after being satisfied with the Marning Corn product that the buyer wants to make repeat purchases so that he is loyalty to the Marning Corn product.

***Brand image on loyalty*:** Brand image (X1) has a substantial impact on consumer loyalty (Y1), as evidenced by a CR statistic of 2.058 and a p-value of 0.040 <0.05 with respect to maize marning. Brand image is the impression obtained in accordance with one's understanding of something. Knowing a product brand and feeling that the brand is good, consumers will remember the brand from their experience, thus making consumers loyal to the product. In Bulukumba Regency, there are various brands of Marning corn in its market which have various similarities both in terms of packaging and taste.

***Product quality on loyalty*:** The CR statistics of 1.016 and a p-value of 0.309> 0.05 indicate that the effect of product quality (X3) on marning maize consumer loyalty (Y1) is a non-significant one. Good food product quality includes taste, shape, aroma, level of maturity, temperature, and so on, which will be considered by consumers in evaluating products and then leading to purchasing decisions and loyalty (Fatlahah, 2015). The researcher uses one of the previous studies with the same topic and theory but different subjects and several flows as references. The research has different results where the previous study has the results that Product quality has a significant effect on customer loyalty (Minar & Safitri, 2017: Djumarno et al., 2017; Khoironil., 2018). Product quality is not significant to the loyalty of maring corn consumers but has a positive influence so that it is necessary to improve the quality of Marning Corn products both in terms of packaging and taste to attract consumer attention.

***Service quality on loyalty*:** Service quality (X2) does not have a significant impact on marning maize consumer loyalty (Y1), as evidenced by the CR statistics of 1.071 and a p-value of 0.284> 0.05. Service quality there are various efforts made by entrepreneurs to meet the needs and expectations of

customers. if the company / store can provide good service quality so that it instills trust from customers. If a customer is satisfied with the quality of service he receives, the customer will continue to make repeat purchases (Setyowati & Wiyadi, 2016). The most desirable service quality is when it surpasses the expectations of the consumer, and the reverse is true if the service is subpar (Fauzi & Mandala, 2019). The researcher uses one of the previous studies with the same topic and theory but different subjects and several flows as references. the research has different results where the previous study has the results that most dominant variable is service quality which has a positive effect on customer loyalty (Thung, 2019) and (Septiana et al., 2021). Service quality is not significant to the loyalty of corn maring consumers but has a positive influence so that the quality of service provided needs a new strategy in terms of service so that it can make consumers loyalty.

***Indirect influence*:** Hypotheses 12 to 17 indirect effects get insignificant results after the sobel test. but still have a positive influence with endogenous latent variables and exogenous latents through intervening variables. The resulting effect of consumer loyalty is 68.4%, purchasing decisions are 85.1% and consumer satisfaction is 95.9% affecting endogenous variables in Marning corn products.

***Conclusion*:** Based on the results and discussion in this study which aims to analyze the direct and indirect effects of brand image variables, service quality, production quality through purchasing decisions and customer satisfaction, it is concluded that the direct effect on variable Y1 or loyalty is significantly influenced by customer satisfaction and brand image. Variable Y2 or purchasing decisions are influenced by brand image, service quality. Variable Y3 or customer satisfaction is influenced by product quality, service quality, and brand image. Based on the indirect effect obtained, it is not significant in influencing consumer loyalty through purchasing decisions and customer satisfaction as an intervening variable from brand image, service quality and production quality. Thus the results obtained that increasing customer satisfaction in the Marning Corn product business can increase customer loyalty, therefore the Marning Corn business can be increased by providing customer satisfaction obtained from brand image, service quality and product quality and consumer purchasing decisions can be improved in terms of brand image and service quality in the Marning Corn business so that the Marning Corn business can get many buyers and provide satisfaction that makes consumers loyal. In conducting research, there are limitations that may affect the results of the study, namely in this study only taking several indicators on each variable X and variable Y and only taking several X variables that influence purchasing decisions, customer satisfaction and loyalty so that further research needs to be developed to examine the influence of other factors that have not been studied on purchasing decisions, customer satisfaction and loyalty using the same or different research methods.

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